

# The White Paper on Environmental Liability: efficiency and insurability analysis

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# The White Paper on Environmental Liability: Efficiency and Insurability Analysis

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## INTRODUCTION

The White Paper on environmental liability, issued by the European Commission in February 2000, has already received a fair amount of attention in the environmental legal literature. Also this review has already devoted two articles to this important policy document.<sup>1</sup> These studies provide an excellent overview of the proposals which have been formulated in the White Paper. The authors, especially Reh binder, are relatively critical since on many significant aspects (such as the burden of proof and causation) no decision has yet been taken. That makes it obviously difficult to provide a final judgment on the White Paper.

That caveat also applies to the angle I would like to take towards the White Paper. This article will address the regime proposed in the White Paper from the perspective of efficiency and insurability. The efficiency analysis will be conducted using the economic analysis of law. This will allow us to test the proposals made in the White Paper according to the criterion of efficiency. The economic literature on insurability will be used to examine whether the regime proposed in the White Paper may, at least on a theoretical level, be considered as insurable.

This article is based on a study undertaken with David Grimeaud for the European Commission in which we had to examine the insurability of the regime proposed in the White Paper.<sup>2</sup> Thus, to some extent this article will merely provide a summary of the larger study carried out for the Commission.

The article is structured as follows: first the efficiency of the White Paper liability regime will be examined, using the economic analysis of law; then attention will shift to insurability by examining whether the White Paper liability regime can be considered as insurable. Specific attention is given to the question of whether financial arrangements other than traditional liability insurance could be used to cover the environmental risk, and it is stressed that it also seems necessary to provide for a regime to cover the financial consequences of environmental damage where no liability rule can apply. Finally it is stressed that competition policy should be applied adequately to insurance markets in order to promote insurability of environmental risks and a few concluding remarks are formulated.

## EFFICIENCY OF THE WHITE PAPER LIABILITY REGIME

### The Importance of Some Theoretical Principles *The Goal of Liability*

The economic analysis of law in general and of accident law more specifically starts from the belief that a legal rule and more particularly a finding of liability will give incentives to potential parties in an accident setting for careful behaviour.<sup>3</sup> Thus, economists tend to stress the deterrent function of tort law. Lawyers, on the other hand, also mention this deterrent function sometimes, but tend to attach more value to the compensation goal of accident law. This 'victim protection' argument is discussed in the

1 See P. Rice, 'From Lugano to Brussels via Aarhus: Environmental Liability White Paper Published', *Environmental Liability*, 2000, at 39 to 45 and E. Reh binder, 'Towards a Community Environmental Liability Regime: The Commission's White Paper on Environmental Liability', *Environmental Liability*, 2000, at 85 to 96.

2 That report (M. Faure and D. Grimeaud, 'Financial assurance issues of environmental liability', final version 4 December 2000) has been made available electronically on the Commission's website: <http://www.europa.eu.int/comm/environment/liability/followup.htm>

3 For excellent overviews of the role of liability and insurability as 'engineering instruments' in environmental policy see A. Endres and B. Staiger, 'Ökonomische Aspekte des Umwelthaftungsrecht', in M. Ahrens and J. Smol (eds), *Umwelthaftung, Risikosteuerung und Versicherung*, Berlin, Erich Schmidt Verlag, 1996, at 79 to 93; G. Wagner, 'Haftung und Versicherung als Instrumente der Techniksteuerung', *Versicherungsrecht*, 1999, at 1441 to 1480; A. Monti, 'Environmental Risk: A comparative law and economics approach to liability and insurance', *European Review of Private Law*, 2001, at 51 to 79, and M. Gimpel-Hinteregger, *Grundfragen des Umwelthaftung*, Wien, Manz, 1994, at 19 to 58.

law and economics literature as well.<sup>4</sup> There, however, it is often stressed that the best way to protect victims is to avoid creating victims in the first place. Of course no one will argue that prevention of accidents is not also a means of protecting victims. This difference in emphasis between the approaches is also characterised as an *ex ante* as opposed to an *ex post* vision. Whereas lawyers tend to be more interested in the accident problem *ex post*, where there is a victim who needs to be compensated,<sup>5</sup> economists look at the accident problem in an *ex ante* perspective by asking how an *ex post* finding of liability will influence *ex ante* the incentives of potential parties in an accident setting for care-taking. It is interesting to have a brief look at the economic principles of accident law, since the White Paper itself clearly refers to the fact that it is held that a finding of liability will provide appropriate incentives for accident prevention.

Let us address the goal of tort law as the minimisation of accident costs: the costs of accident avoidance and the expected damage. Indeed, from a social point of view accidents do not only cause costs from the moment an accident occurs and harm is suffered; potential parties in an accident setting, both injurers and victims, make investments in care to avoid the occurrence of an accident. Sometimes costs of care taking are very clear and visible. We can refer for instance to the investments made by firms to reduce environmental pollution by investing in water cleaning equipment or the investment to install safety controls to avoid product defects. But also the mere fact that in a traffic accident case both injurers and victims are limited in their freedom of movement, for instance because they have to drive or work carefully, is considered as a cost by economists. A difference is further made between so-called unilateral accidents in which only the care taken by one of the parties (the injurer) can influence the accident risk on the one hand, and bilateral accidents in which the behaviour of both parties can influence the accident risk, on the other hand. In a bilateral accident situation, the goal of accident law should therefore be to give incentives to minimise the total costs of care taking by the potential injurer and the potential victim, and the expected damage that will occur in case of an accident.<sup>6</sup>

### Optimal Liability Rules

Liability law should therefore give an incentive to potential parties in the accident setting to adopt this optimal care level. Looking at a unilateral accident situation one can state that two legal rules would give the injurer incentives for taking optimal care. If there was no liability at all clearly the injurer would have no incentive for care taking; therefore in a no liability situation the externality will not be internalised and an inefficient outcome will follow. If a negligence rule is adopted, the injurer will take optimal care, provided the due care required in the legal system is equal to the optimal care as defined in the model.<sup>7</sup> This can be easily understood. If the judicial system sets the due care standard correctly the injurer can avoid liability by taking due care. Thus he will have to take care to avoid the accident, but if he does so he can avoid paying the expected damage. Of course the injurer could take more care than the legal system requires him to do under a negligence rule, but he will have no incentive to do so since he can already escape liability by following the due care standard. Of course the injurer could also spend less on care than the legal system requires him to. In that case he will have lower costs of care taking, but he will have to pay damages if an accident occurs. Since the optimal care standard was defined as exactly that level of care where the marginal costs of care equal the marginal benefits in accident reduction, taking less than the due care standard will not be of interest to the individual injurer since it will increase his total expected costs. Thus a negligence rule will lead to an efficient outcome as long as the legal system defines the due care as equal to the optimal care of the model.

Also, a strict liability rule will lead to the optimum in a case where only one party can influence the accident risk. The reason is quite easy. A strict liability rule basically says that the injurer has to compensate in any case no matter what care he took. It is sometimes argued that this will lead the injurer to take excessive precautions or to take no care at all since he is liable anyway. Neither of these statements seems true. By making the injurer strictly liable in fact the social decision is shifted to the injurer. In a unilateral accident case it simply means that he has to bear all the social costs of accidents, that is, his own costs of care taking and the expected damage.<sup>8</sup> Therefore, he will take exactly the same decision, namely to minimise his total

4 Schwartz showed that rules of tort law may serve both the aims of deterrence and corrective justice (G. Schwartz, 'Mixed Theories of Tort Law: Affirming both Deterrence and Corrective Justice', *Texas Law Review*, Vol. 75, 1997, at 1801 to 1834).

5 This tendency is partially explicable through the case method used in common law countries for law teaching; it focuses very much on solving one particular case, sometimes neglecting the consequences of the solution in one case for the behaviour of other parties and thus of safety in general.

6 This distinction has been made by S. Shavell, *Economic Analysis of Accident Law*, Cambridge, Harvard University Press, 1987, at 7.

7 S. Shavell, Note 6 above, at 8 and G. Calabresi, 'Optimal Deterrence and Accidents', *Yale Law Journal*, Vol. 84, 1975, at 658.

8 A.M. Polinsky, *Introduction to Law and Economics*, Boston, Little, Brown & Co, 1983, at 39; S. Shavell, 1980, at 11 and Note 6 above, at 8.

expected accident costs. We discussed in the model that this could be reached at the optimal care level. Therefore, the injurer will take optimal care since this is the way to minimise his total expected costs. Spending more on care would increase his costs of care taking inefficiently and spending less on care would increase the expected damage inefficiently.

This leads to the conclusion that in a unilateral accident setting both a negligence rule and a strict liability rule will lead to a minimisation of the social costs of accidents. Of course there remain differences between both rules as far as the secondary and tertiary costs are concerned. Under a negligence rule, in principle, no cases of liability could be found since an injurer would always follow the due care standard required in the legal system and would thus never have to compensate his victim. Under a strict liability rule, on the other hand, victims would always receive compensation. If the assumption of risk neutrality is relaxed and if only one of the two parties were risk averse, for instance the victim, the choice between negligence and strict liability could result in a preference for one of these rules depending which party is risk averse. Also, the administrative and information costs of both rules differ. The strict liability rule seems to have the disadvantage that a legal case will follow with every accident since the injurer is always bound to compensate. Court costs can therefore be expected to be high. On the other hand, the negligence rule seems to have high information costs for the judge since he will have to determine in a particular case what the marginal costs and marginal benefits of care taking were.<sup>9</sup>

The analysis of course can be much more refined, for instance if one goes into the bilateral accident situation. In that case a contributory or comparative negligence defence has to be added to a strict liability rule to also give victims an incentive to take optimal care. In other words, since victims would be fully compensated under strict liability, some defence should be added if the victim can equally influence the accident risk. Otherwise the victim would lack the incentives for prevention.

The advantage of the negligence rule in that case is that the victim will anyway assume he has to bear the loss, so he will always have an incentive for taking optimal care. The simple reason is that a fully informed victim (which is obviously a strong assumption) will be aware of the fact that the injurer will take due care to avoid liability. Hence

the victim is left with his loss and will automatically have incentives for prevention, even if no defences are added. A further refinement can be found when attention is given to factors other than care that can influence the accident risk. In the literature attention has especially been paid in that respect to the influence of the activity level.<sup>10</sup>

### **Strict Liability for Environmental Harm?**

How do the economic arguments in favour of strict liability apply to the environmental case?

Although the classic victim compensation argument may as such not justify the introduction of strict liability for environmental pollution, there are, on the other hand, economic reasons based on deterrence efficiency for introducing a strict liability rule. Environmental pollution can in most cases certainly be considered a unilateral accident, that is an accident where only the injurer can influence the accident risk. In this case we noted that the economic model predicts that the advantage of the strict liability rule is that it will give the injurer an incentive both to adopt an optimal activity level and to take efficient care. Since the victim cannot influence the accident risk, strict liability seems to be the first best solution for giving the potential polluter optimal incentives for accident reduction in those cases.<sup>11</sup> There may, however, obviously be cases where parties other than the polluter could influence the risk of environmental degradation. These are not always the victims in the traditional sense. One can imagine cases where, for example, public or private actors would be responsible for managing a natural resource area. It might be desirable in those cases that liability should also aim at giving them appropriate incentives to take those preventive measures. In that case environmental pollution would constitute a bilateral risk on condition that one considers that third actor a victim.<sup>12</sup> However, since, in the example

10 See M. Adams, 'New Activities and the Efficient Liability Rules', in M. Faure and R. Van den Bergh (eds), *Essays in Law and Economics. Corporations, Accident Prevention and Compensation for Losses*, Maklu, 1989; P. Diamond, 'Single Activity Accidents', *Journal of Legal Studies*, 1974, at 107 to 164 and S. Shavell, 'Strict liability versus negligence', *Journal of Legal Studies*, 1980, at 1 to 25.

11 See, for an application to nuclear liability, M. Faure, 'Economic Models of Compensation for Damage Caused by Nuclear Accidents: Some Lessons for the Revision of the Paris and Vienna Conventions', *European Journal of Law and Economics*, 1995, at 21 to 43.

12 Although it is then probably more a case where more parties can influence the accident risk (and should therefore be given appropriate incentives), since the actors in the example given can not be considered traditional victims who suffer the loss personally (see also G.J. Niezen, 'Aansprakelijkheid voor milieuschade in de Europese Unie' in *Ongebonden Recht Bedrijven*, Kluwer, 2000, at 171).

given, the influence of the polluter is probably still far more important than the influence of the other actors, the outcome does not change: a strict liability rule still is warranted to give the party who has most influence on the accident risk (the polluter) the incentive to take preventive measures. It is, however, important to remember that in bilateral cases a defence should always be added to control the victim's behaviour as well. Moreover, if parties other than the polluter can also influence the accident risk, they might be held liable as well for the amount in which they contributed to the loss. That is, however, not an argument against the strict liability of the polluter.

So, if we apply the economic criteria determining the choice between negligence and strict liability to the environmental case, there seem to be strong arguments in favour of the introduction of strict liability. In many cases, environmental pollution will be truly unilateral in the sense that only the injurer's activity can influence the accident risk, which constitutes a strong case for strict liability.<sup>13</sup> In other cases the victim will certainly be able to exercise an influence on the risk as well. One can more specifically think of situations where the victim has the possibility of mitigating damages after the accident occurred. As has been mentioned, this can be controlled by adding a contributory or comparative negligence defence to the strict liability rule.

How do these economic principles compare to the environmental liability regime, proposed in the White Paper?

### **The White Paper: Mitigated Strict Liability Rule**

#### **A Balanced Approach**

This original approach of the European Commission, which, incidentally, deviates from earlier signals that a general strict liability regime would be introduced,<sup>14</sup> is very much in line with the predictions of the economic model as presented above.<sup>15</sup> Hazardous activities can often be considered

unilateral and in those situations it is important to control the injurer's activity through a strict liability rule. Even if the hazardous activities are bilateral in nature there remains a case for strict liability since the hazardous activity will have a far more important influence on the risk than the victim's activity. However, in a bilateral case a defence should be added to the strict liability rule to take into account the victim's behaviour.<sup>16</sup> The same is, however, not true in the case of non-hazardous activities which may cause environmental harm. For those cases the White Paper correctly proposes a negligence rule. The dividing line (non-hazardous/hazardous) chosen by the European Commission, seems therefore to follow economic logic.

The White Paper indeed seems to follow a balanced approach since it does not introduce a general strict liability rule for all environmental damage, but opts for a differentiated approach with a fault rule for damage resulting from non-dangerous activities and a strict liability rule for damage resulting from dangerous activities. This not only follows the economic test for strict liability; it seems also more balanced than the approach taken in some Member States. Some Member States seem to have adopted some kind of strict liability regime for environmental harm, without the differentiations made in the White Paper.<sup>17</sup>

#### **Nuances**

However, although this general approach chosen in the White Paper, of a different regime for dangerous and non-dangerous activities, seems at first sight to follow economic logic, several questions remain. One point is that it should be remembered that the economic doctrine prescribes the medicine of strict liability for cases of unilateral accidents in particular. Since the regime of the White Paper sketches general options, but not the details, it is as yet unclear whether the cases to which the regime of the White Paper will apply will indeed all be unilateral cases. It is only for unilateral cases that the theoretical framework described above prescribes a strict liability rule. But even in cases which are not unilateral, where the victim can also influence the risk of environmental harm perspectives other than the economic one may provide arguments in favour of strict liability (combined with a contributory or comparative negligence defence). This might be the case if heavy weight is put on, for example, the polluter pays principle and from

13 In some cases it will be the victim's activity that caused the harm, for example, if the victim knowingly came to the nuisance. This may then lead to a denial of a claim on compensation. See, in that respect, the discussion on the coming to nuisance doctrine, by D. Wittman, 'First come, first served: an economic analysis of "coming to nuisance"', *Journal of Legal Studies*, 1980, at 557 to 568.

14 An earlier version indeed contained a strict liability regime. See, on this earlier draft of the White Paper, L. Bergkamp, 'A future environmental liability regime', *European Environmental Law Review*, 1998, at 200 to 204 and C. De Vries, 'Community action on environmental liability', in L. Wiggers-Rust and K. Deketelaere (eds), *Aansprakelijkheid voor milieuschade en financiële zekerheid*, Die Keure-Vermande, 1999, at 141 to 147.

15 The (non-)dangerous character of the activity as dividing line was also suggested by Bergkamp, Note 14 above, at 200; also Niezen, a Dutch company lawyer, recognises that it makes sense to introduce strict liability for dangerous activities (G.J. Niezen, Note 12 above, at 170).

16 Such a defence is effectively proposed in the White Paper (at 18), which confirms the conclusion that the White Paper is essentially in line with what the economic model suggests.

17 Note, however, that most Member States' liability laws do not generally cover damage to natural resources, as the White Paper does.

that perspective a generalised strict liability rule for environmental damage would be preferred, also in bilateral cases. It should, however, be remembered that in that case it would be more for distributional reasons that a strict liability rule is preferred and less for deterrence or efficiency. This is obviously a political choice. Moreover, even if a strict liability rule for environmental harm would generally be preferred for political reasons, the policy-maker should be aware of the fact that there may be disadvantages as far as deterrence is concerned, for example, if one considers the fact that the victim's activity level may have an important influence on the accident risk.

Another aspect which has to be considered as well concerns the fact that the White Paper merely deals with damage to biodiversity and damage caused as a result of soil pollution. It is not immediately clear how the option for these types of damage (and not generally for all environmental harm) relates to the economic criteria for strict liability. A problem is that, as has been mentioned already, the White Paper sketches several rough ideas, but not yet the details of a particular liability regime. If one assumes that damage to biodiversity would be an example of unilateral accident situations, this would obviously enforce the argument in favour of strict liability. But, as we have argued above, even if damage to biodiversity were to be considered bilateral,<sup>18</sup> there would still be an argument in favour of strict liability since the ultra-hazardous activity can certainly be supposed to have a more important influence on the accident risk than the victims.

### Remedy for Insolvency?

There is a reason why the apparent advantage of strict liability should be somewhat balanced. Until now, it has been assumed that the injurer has money available to pay compensation to the victim. If, however, the amount of the damage exceeds the injurer's wealth, a problem of underdeterrence will arise. Under strict liability the injurer will consider the accident as one which is equal to his total wealth and will therefore only take the care necessary to avoid an accident with a magnitude equal to his total wealth. If that wealth is lower than the magnitude of an accident he will take less than the optimal care and therefore a problem of underdeterrence arises under strict liability.<sup>19</sup>

Insolvency is less of a problem under negligence since under that rule the injurer will still have an incentive to take the care required by the legal system as long as the costs of taking care are less than his individual wealth. Taking due care remains a way for the injurer to avoid having to pay compensation to the victim. If there is thus a potential accident setting where the magnitude of the loss may be higher than the injurer's wealth (which can often be the case in environmental liability), this constitutes an argument in favour of negligence rather than strict liability.

This means that strict liability will only give incentives for efficient prevention if the insolvency risk can be cured. If, in other words, the liability regime of the White Paper were to be applied in a situation where the potential magnitude of the harm would always largely outweigh the financial possibilities of the injurer (and no remedies would be available), strict liability would lead to underdeterrence and negligence would even be preferred. It is therefore important to stress that if one assumes that insolvency may arise, a remedy has to be found which can provide the injurer with adequate incentives. One such remedy may be insurance. It is, moreover, reasonable to assume that an insolvency risk may arise since damage may often be caused by relatively small entities with limited financial means. History has unfortunately shown that even companies with limited financial means may cause huge environmental damage and may thereafter be judgment-proof. Moreover, the insolvency risk may even arise with larger companies since almost all (larger) companies are organised as legal entities and therefore enjoy the benefits of the limited liability of the corporation. It is precisely because companies enjoy limited liability that some authors have argued that serious underdeterrence may arise.<sup>20</sup>

In sum, since insolvency problems are realistic in environmental cases, the ~~strict~~ liability regime proposed in the White Paper can only provide efficient incentives if the insolvency problem can be cured.

### Retroactivity

An important point in environmental liability is always whether a specific liability regime should be made retroactive or not. Looking at the efficiency aspect first one can relatively easily state that a retroactive application of a new standard of care seems contrary to the principle that liability should give incentives for correct behaviour in the future. If suddenly a certain behaviour is considered

18 Although it is doubtful who should then be considered the victim who influences the accident risk.

19 S. Shavell, 'The judgement proof problem', *International Review of Law and Economics*, 1986, at 43 to 58. Insolvency causes especially a problem under a strict liability rule, but less so under negligence. See W. Landes and R. Posner, 'Tort law as a regulatory regime for catastrophic personal injuries', *Journal of Legal Studies*, 1984, at 417.

20 See H. Hansmann and R.H. Kraakman, 'Toward Unlimited Shareholder Liability for Corporate Torts', *Yale Law Journal*, Vol. 100, 1991, at 1879.

to lead to liability *ex post*, whereas this was not the case *ex ante*, finding of liability can then obviously never affect the incentives of that particular tortfeasor for the future. Retroactive liability therefore does not seem to serve any purpose as far as the prevention of accidents is concerned. It has been shown both in the European<sup>21</sup> and American contexts that a retroactive liability seems inefficient. Boyd and Kunreuther even held that retroactive liability may weaken the incentive to take precautions against future environmental costs.<sup>22</sup>

The retrospective application of liability seems thus, at first sight, to collide with the main economic principles of tort law, discussed above, being the idea that foreseeing a liability *ex post* should give incentives *ex ante* for the prevention of accidents. Since the behaviour was not considered wrongful at the time, a retrospective application of new standards, either through case law or through regulation, could not affect the incentives for future behaviour of any specific operator. The economics of tort law indeed assumes that future incentives for prevention will be affected, given the legal regime in force. It is hard to argue that *ex post* liability will positively affect the incentives for behaviour which was not considered to give rise to liability at all at the time the act was committed. Retrospective liability hence seems problematic from an efficiency point of view. In addition, from a distributive point of view retrospective liability can also be criticised.<sup>23</sup>

For now it is interesting to point to the fact that once again the White Paper on environmental liability seems to follow economic logic since it clearly states that the liability regime it proposes should be non-retrospective.<sup>24</sup> This follows suggestions from studies preceding the White Paper, such as the study on liability for contaminated sites, which equally clearly argues against liability for past pollution.<sup>25</sup>

## Defences

It is not possible within the scope of this article to address the complicated area of defences in detail. In this respect we have to refer to the wider study on which it is based. However, since the starting point of economic analysis is

that a liability regime should only be used if it can affect further incentives, a variety of defences could play an important role in environmental liability:

- The defence of *force majeure* could generally be accepted in cases where it can be shown that the polluter's behaviour could never have influenced the accident risk;
- A contributory or comparative negligence defence should be added to the strict liability rule to provide the victim with incentives to preventive measures as well;
- Following regulation or the conditions of a licence (regulatory compliance defence) should as a general rule not exclude from liability, unless in exceptional circumstances;
- A development risk defence should, as a general rule, not be accepted, since liability for development risks might positively affect incentives to obtain information on optimal precautionary measures; however, the policy-maker should be careful that the liability for the development risk does not become a retrospective liability 'in disguise' whereby the content of the liability rule is in fact changed;
- A 'first use' defence will generally not be accepted except in cases where the 'coming to nuisance' might be judged to be the victim's contributory negligence;<sup>26</sup>
- Finally we found no reason to exclude or mitigate the environmental liability regime proposed in the White Paper for small and medium-sized enterprises.

## Summary

As indicated above, our assessment of the regime proposed in the White Paper indicates that this regime corresponds to a large extent to the theoretical foundations which were sketched above and can hence be considered efficient. The reason is that the White Paper does not impose a general strict liability rule for any type of environmental harm, but comes with a balanced proposal to limit the strict liability rule to specific types of activities which are considered to be dangerous. However, a final assessment of the proposed regime is obviously not possible since some of the specific features are not yet known. But in general, we can only recommend continuing to follow the lines chosen so far in the White Paper of limiting the strict liability regimes for dangerous activities, or at least for activities where one can assume that the victim's influence on the accident risk will be relatively small (so-called unilateral accidents).

21 See M. Faure and P. Fenn, 'Retroactive liability and the insurability of long-tail risks', *International Review of Law and Economics*, 1999, at 487 to 500.

22 See J. Boyd and H. Kunreuther, 'Retroactive Liability or the Public Purse?', *Journal of Regulatory Economics*, 1997, at 79 to 90.

23 See also M. Faure and T. Hartlief, 'Remedies for expanding liability', *Oxford Journal of Legal Studies*, 1998, at 688 to 689.

24 White Paper, at 16.

25 S. Deloddere and D. Ryckbost, 'Liability for contaminated sites, study for the Commission'. (A summary is included in the White Paper, at 49 to 51.)

26 See Note 13 above.



The same is true for the starting point in the White Paper, that the new environmental liability regime should not be retroactive. If one believes, as the White Paper apparently does, that environmental liability should have a positive effect on incentives to prevent damage, this is a principle to which the European policy-maker should certainly adhere. There are, in addition, a few other recommendations concerning the structure of environmental liability which are largely related to the insurability of the risk, which we will come back to below.

However, our conclusion that a non-retroactive strict liability for environmental damage caused by dangerous activities seems efficient, holds only where the potentially responsible party has money available to compensate for the losses he causes and hence no insolvency problem arises. If, on the contrary, the defendant is shown to be judgment-proof, a solution to this insolvency problem should be sought, since otherwise strict liability could lead to underdeterrence (and obviously to undercompensation as well). Moreover, even if, from a deterrence perspective, a retrospective liability is rejected, the policy-maker still might want to think about additional financial arrangements to cover these 'sins of the past'. If these are lacking, one cannot escape the tendency of judges (and legislators) to (inefficiently) hold polluters today liable for damage caused in the past. Such a tendency can only effectively be avoided in other financing mechanisms are available to provide compensation for historical pollution (see below, pages 199 to 200).

Let us now turn to the question of whether a remedy can be found for the insolvency problem by addressing the insurability of the White Paper regime.

## INSURABILITY OF THE WHITE PAPER LIABILITY REGIME

This is a brief look at whether the White Paper liability regime can be considered as insurable. Obviously it is not possible within the scope of this article to discuss this issue at length. We can only point to the importance of the predictability of the environmental liability. In addition some straightforward advice to insurers can be formulated to cope with the environmental risk, and the question can be asked what the legislator could do to promote the insurability of the environmental liability risk. More specifically, the question arises whether some form of compulsory insurance should be introduced.

### Predictability

The predictability of liability (and hence the insurability of that liability) will be determined by the way in which the

conditions for liability are described. It is obvious that the more clearly the conditions for liability are described by the legislator and the less uncertain the wording, the higher the predictability of the insured's exposure to liability will be. The more ambiguous the liability laws, the more difficult it may be for an insurance provider to predict the cost of liability claims. The conclusion at the normative level is that the policy-maker should obviously try to make the scope of liability *ex ante* as clear as possible. In other words: the legislator should try to avoid legal uncertainty which may endanger insurability.<sup>27</sup> Obviously a theorist could refer to Kunreuther *et al.* who claim that even with ambiguous wording a liability risk remains insurable, since an insurer can add an additional risk premium to cope with this uncertainty resulting from ambiguous wording.<sup>28</sup> However, it is equally clear that such a solution would only be second best; the less costly and preferred solution would be to choose a wording which excludes ambiguity and hence contributes to the *ex ante* predictability of the risk.

One could go as far as Rogge, director of the Belgian Association of Insurers, and hold that any coverage for ecological damages would be uninsurable if these are not 'identifiable and measurable'.<sup>29</sup> Also another expert in Belgian environmental insurance, Ranson, recently argued that ecological damage would be uninsurable.<sup>30</sup> This would, in his view, include damage to biodiversity and, for example, the depletion of the ozone layer.<sup>31</sup>

A question that is unavoidable in this context is whether the wording chosen in the White Paper on environmental liability to describe the scope of liability is precise enough to guarantee an assurability of this liability regime. Is it 'identifiable and measurable'? It is at this stage not possible to provide a firm statement on whether the liability regime as provided in the White Paper is sufficiently clear to provide a predictable scope of liability. The reason is simply that the White Paper sketches various ideas, but equally invites comment from all interested parties. The precise scope of the regime is therefore yet unknown. However, several comments on the White Paper have now been published

27 Thus A. Monti, 'Environmental Risk: A comparative law and economics approach to liability and insurance', *European Review of Private Law*, 2001, at 59.

28 H. Kunreuther, R. Hogarth and J. Meszaros, 'Insurer Ambiguity and Market Failure', *Journal of Risk and Uncertainty*, 1993, at 71 to 87.

29 J. Rogge, *Les assurances en matière d'environnement*, looseleaf, Kluwer, 1997, at 6.

30 D. Ranson, 'Verzekering van milieuaansprakelijkheid', *Milieu- en Energierecht*, 2000, at 66 to 73.

31 This, however, does not answer the question whether remediation costs would be uninsurable as well.



and although inevitably academics always criticise such proposals, most of the criticisms do not refer to the fact that they would not understand the liability regime. Apparently the proposed regime is, at least as the main features are concerned, reasonably clear for the academics who have commented on the White Paper so far.<sup>32</sup> Obviously there are still doubts with respect to the issues where the Commission has not taken firm decisions yet, for example concerning the defences.<sup>33</sup>

One could argue that the balanced approach of the Commission in making a distinction between dangerous and potentially dangerous activities on the one hand and non-dangerous activities on the other hand may potentially endanger legal certainty, if it were unclear which is a potentially dangerous activity and which is non-dangerous. However, the White Paper makes it clear that the dangerous activities would be listed, which should clarify the activities which are subject to a strict liability respectively a fault regime.

As yet, uncertainty still exists with respect to the new approach of the White Paper, given that it concerns primarily environmental damage. The concept of 'biodiversity damage' is obviously rather vague as such. However, the White Paper links the damage to biodiversity to the type of biodiversity which is protected in Natura 2000 areas based on the Habitats and the Wild Birds Directives, which again limits the scope and thus increases the clarity. Also, the White Paper specifies that not all damage to biodiversity would be covered, but that there should be a minimum threshold for triggering the regime. Only significant damage should be covered. Criteria for this notion have not yet been defined but should, according to the White Paper, be derived in the context of the Habitats Directive. A study concerning the interpretation of this notion has been delivered as well.<sup>34</sup> The fact that not every

damage to biodiversity (which would indeed be too vague) is covered, but that a minimum threshold will have to be met, may increase the possibility of an individual insurer judging whether his insured may endanger a particular habitat and thus be subjected to the environmental liability regime as proposed in the White Paper. However, the precise description of the minimum threshold and the definition of 'significant damage' which will take place at a later stage, should of course be such that the predictability of the liability is guaranteed. The same holds for a very sensitive issue, the question of how natural resource damage should be evaluated.<sup>35</sup> Various economic techniques exist, but they remain debated. To some extent this problem may be remedied by the fact that the main goal of the liability regime in the White Paper is, as far as biodiversity damage is concerned, to ensure restoration. This could to some extent circumvent the debate on the valuation of natural resource damage. However, a minimum level of restoration will still have to be determined, which may give rise to uncertainties (and hence unpredictability) as well.

The same can be said concerning liability for contaminated sites. Again, the White Paper states that the 'dangerous activities approach' would apply and that the regime would be triggered only if the contamination is significant. The liability for contaminated sites is hence only strict in case of dangerous and potentially dangerous activities (to be specified at a later stage). For contaminated sites caused by non-dangerous activities the EC environmental liability regime will not apply. The White Paper seems, as far as the liability for contaminated sites is concerned, largely to follow the Belgian approach of the Interuniversity Commission, which has resulted in the Flemish Decree on Soil Clean-up.<sup>36</sup> The White Paper relies, as does the Belgian approach, on clean-up standards which will have to determine whether clean-up of a contaminated site is necessary, and on clean-up objectives which define

32 See, for example, G. Betlem, 'Commission adopts White Paper on environmental liability', TMA, 2000, at 58 to 60 and P.F.A. Bierbooms and E.H.P. Brans, 'Het EU witboek milieu-aansprakelijkheid: de vage contouren van een toekomstig aansprakelijkheidsregime', M&R, 2000, at 182 to 188 and P. Rice, 'From Lugano to Brussels via Arhus: Environmental Liability White Paper Published', *Environmental Liability*, 2000, at 39 to 45.

33 Because on some issues (for example, causation or defences) no firm decisions have yet been taken. Rehinder is rather critical of the White Paper. He hopes for 'major improvement of the proposal' (see E. Rehinder, 'Towards a Community Environmental Liability Regime: The Commission's White Paper on Environmental Liability', *Environmental Liability*, 2000, at 85 to 96); others are critical with respect to the proposals on action rights of NGOs (R. Hunter, 'European Commission White Paper proposals on NGO rights of action: wrongful rights of action', *Tijdschrift voor Milieu-aansprakelijkheid*, 2000, at 125 to 126).

34 See footnote 14 in the White Paper on environmental liability.

35 See also White Paper, at 23.

36 For a detailed analysis of this decree see D. Ryckbost, 'Het decreet van 22 februari 1995 betreffende de bodemsanering', TMR, 1995, at 178 to 205 as well as K. Deketelaere, 'Het bodemsaneringsdecreet en aspecten van milieurecht', in K. Deketelaere (ed.), *Het decreet betreffende de bodemsanering*, Bruges, Die Keure, 1995, at 10 to 59; M. Deketelaere, 'Aansprakelijkheid bij historische bodemverontreiniging', in *ibid.*, at 135 to 142; M. Deketelaere, 'Het Vlaamse decreet en reglement betreffende de bodemsanering', in K. Deketelaere (ed.), *Milieurecht in België*, Status Questionis Anno 1997, Bruges, Die Keure, 1997, at 265 to 311; D. Ryckbost and S. Deloddere, *Bodemsanering in Vlaanderen*, Antwerp, Kluwer, 1997; and A. Van Oevelen, 'De buitencontractuele aansprakelijkheid van de eigenaar of exploitant van een onroerend goed en de verzekering van die aansprakelijkheid', RW, 1997-98, at 1223 to 1239.

the quality of soil and water at the site to be maintained and restored. This approach is not unfamiliar to Member States where liability for soil pollution damage is actually insured, so that it can hardly be argued that liability for contaminated sites, as proposed in the White Paper, would be so unpredictable that it would be uninsurable.

There is, however, one particular point of concern about the regime proposed in the White Paper which may endanger the insurability. This has to do with the balanced approach chosen which may make a future liability regime highly complex. A scheme provided in the White Paper itself makes it clear that the proposed regime is not only very balanced, but also very complex. Indeed, as the summary shows, the applicable regime will depend both on the type of damage (traditional damage, contaminated sites or damage to biodiversity), and in addition on the type of activity (dangerous or not). Moreover, the White Paper argues that it focuses on damage to biodiversity, since most existing Member States' environmental liability regimes would not cover that type of damage. The question, however, arises whether that is generally true; Member States certainly have rules on traditional damage and contaminated sites.

Hence this entails a risk of increased legal complexity, which could lead to cases where different legal regimes (different European and national regimes) apply to various types of damage, resulting from a single pollution case. That would obviously create legal uncertainty and might endanger the insurability.

To a large extent this is due to the fact that until now the White Paper has not addressed the question of how the different regimes proposed should be combined, if, for example, a non-dangerous activity causes damage to the soil, to human health and to biodiversity as well. A future regime should definitely clarify better how these (European and national) rules apply to specific cases in order to create the legal certainty necessary to make the risk insurable.

In sum, if one takes a cynical approach one could point to the fact that insofar as the White Paper proposes a liability regime for biodiversity it is uninsurable, since experts in both Belgium and the Netherlands argue that a well defined environmental liability regime is insurable, but a vague damage notion such as biodiversity damage is not. It will therefore be important to see how the notion of liability for biodiversity damage will precisely be defined in the future regime. If the concept is 'liability for biodiversity' but the remedy is a duty to pay (reasonable and proportional) remediation costs, practice has shown that policies covering remediation costs are available. This is more particularly the case if insurance is not offered via traditional liability insurance, but on a first-party basis.

However, a point of concern remains in the fact that the proposed liability regime will come on top of national laws, which may make it difficult to determine in specific cases which legal rules apply. That should certainly be clarified, since also legal uncertainty could endanger insurability.

### Advice to Insurers

Obviously within the insurance world itself many devices have been developed to cope with the environmental risk. Indeed, in the literature many recommendations have been formulated for insurers on how they can themselves increase the insurability of environmental risks and hence, limit their own exposure to risk. Such advice is relatively straightforward and will not be explained here in any detail.<sup>37</sup> These recommendations can be summarised as follows:

- Control moral hazard effectively;<sup>38</sup>
- Reduce adverse selection;<sup>39</sup>
- Apply an effective risk differentiation;<sup>40</sup> and
- Provide coverage of the environmental risk on a 'claims-made' basis.<sup>41</sup>

### Increasing Insurability: Recommendations to the Legislator

In addition the literature has indicated that the way in which liability risk is formulated in legislation can have a significant influence on the insurability of risks as well. Therefore, there are some recommendations which can be formulated to the policy-maker (and which are thus relevant for a future European environmental liability regime), since these features may influence the insurability of the liability risk:

37 For details see M. Faure and T. Hartlief, 'Remedies for expanding liability', *Oxford Journal of Legal Studies*, Vol. 18, 1998, at 681 to 706.

38 See S. Shavell, 'On Moral Hazard and Insurance', *Quarterly Journal of Economics*, 1979, at 541 to 562.

39 G. Priest, 'The current insurance crisis and modern tort law', *Yale Law Journal*, 1987, at 1521 to 1590.

40 On the costs of risk differentiation, see S. Bohnstein, 'The Economics of Costly Risk Sorting in Competitive Insurance Markets', *International Review of Law and Economics*, 1989, at 25 to 39; and W.P.J. Wils, 'Insurance Risk Classifications in the EC: Regulatory Outlook', *Oxford Journal of Legal Studies*, 1994, at 449 to 467.

41 Thus J.H. Wansink, *De algemene aansprakelijkheidsverzekering*, 2nd edn, 1994, at 110; J.H. Wansink, 'De aansprakelijkheidsverzekering en de dekking van "long tail risico's"', *Aansprakelijkheid en Verzekering*, 1995, at 1 to 5 and J. Spier, *De uitdijende reikwijdte van het aansprakelijkheidsrecht*, Preadvies Nederlandse Juristenvereniging, chapter 2.

- Be cautious with a shift of the burden of proof as far as causation is concerned;
- If the risk of causal uncertainty is shifted to responsible parties there is a threat of uninsurability;
- The same risk exists with the use of joint and several liability systems; a policy-maker wishing to increase insurability should avoid joint and several liability;
- Obviously retrospective liability should be avoided; this is not only inefficient from a deterrence perspective, but may equally be uninsurable;
- Allow a claims-made coverage of the environmental risk.

The reasons for these recommendations are obviously given in further details in the report. If these conditions are met, the question which constituted the starting point of the study, that is, whether environmental liability is insurable, can be answered in the affirmative.

In any case the legislator should not introduce financial caps on liability with the arguments that these would be necessary to increase insurability. Caps are not necessary to increase insurability, since insurers could themselves put a financial limit on liability; caps may lead to underdeterrence and undercompensation and could violate the polluter pays principle. Hence they should in principle be avoided in a future environmental liability regime.

### Compulsory Insurance?

However, even though theoretically all the conditions for an optimal insurability of environmental liability could be met, insurance doctrine has indicated that in many countries (such as in Belgium) the environmental liability market is still relatively poorly developed. There are still no sufficient statistics to assess the risk accurately, and the large numbers, needed to avoid adverse selection, may be lacking, simply because of a lack in demand. A lack in demand for coverage for environmental risks may to some extent be due to deficiencies in information: potentially responsible parties may not be sufficiently aware of the risks or the possibilities of financial coverage. Hence they may underinsure, and the judgment-proof problem as a result of insolvency will still arise.<sup>42</sup> This inevitably poses the important question at the policy level as to whether an obligation to seek financial security should be imposed on potentially responsible parties. This question has to be answered in a very balanced manner for the simple reason that theoretically the

arguments in favour of such a duty are strong, but there may be many dangers, loopholes and practical problems. The theoretical case is relatively simple: without financial security against insolvency strict liability may lead to underdeterrence.<sup>43</sup> Insolvency indeed poses greater problems under strict liability than under negligence. We would therefore not support the proposal made in the White Paper not to impose an obligation to have financial security yet, in order to allow the necessary flexibility as long as experience with the new (strict liability) regime still had to be gathered. From a theoretical perspective one could make the case that a strict liability regime should not be introduced without financial guarantees if a serious insolvency risk emerges. If prevention of damage were the goal of a liability system in that case it would be better to opt for a negligence rule. Hence, we believe that the desirability of a strict liability rule hangs decisively on the availability of financial security. Simply trying out the new strict liability regime and waiting for financial and insurance markets to develop the necessary mechanisms to provide security seems like a dangerous route to take.

If one believes that the liability regime proposed in the White Paper should be strict (and we believe that there are strong reasons in favour of that statement), then the strict liability regime should be combined with some kind of obligation to provide financial security, if it can be assumed that a insolvency risk may emerge. However:

- This financial security should not necessarily be liability insurance;
- The policy-maker could indicate that a wide variety of mechanisms may be used to provide this financial security;
- The type of financial security provided should not be regulated in a general matter, but its adequacy may be assessed, for example, by the administrative authorities who can require financial security as a condition in the licence;
- At the same time the administrative authorities can equally determine the required amount of financial security on a case-by-case basis;

43 P.J. Jost, 'Limited liability and the requirement to purchase insurance', *International Review of Law and Economics*, 1996, at 259 to 276. A similar argument has recently been formulated by M. Polborn, 'Mandatory Insurance and the Judgement-Proof Problem', *International Review of Law and Economics*, 1998, at 141 to 146 and by G. Skogh, 'Mandatory Insurance: Transaction Costs Analysis of Insurance', in B. Bouckaert and G. De Geest (eds), *Encyclopedia of Law and Economics*, Cheltenham, Edward Elgar, 2000, at 521 to 537. Skogh has also pointed out that compulsory insurance may save on transaction cost.

42 See S. Shavell, 'The judgement proof problem', *International Review of Law and Economics*, 1986, at 43 to 58.

- There should certainly not be the introduction of a duty to accept risks on liability insurers, since this may have negative effects on the control of moral hazard;
- The administrative authorities imposing such a duty to provide financial security should make sure that sufficient varieties of financial securities exist on financial and insurance markets in order to avoid governments or administrative authorities becoming dependant on the financial or insurance industries, which would then effectively become the licenser of industrial activities;
- The proposed regime corresponds with the proposals made by the Interuniversity Commission in the Flemish Region.<sup>44</sup> These proposals were promulgated as the result of information provided by insurers and the regime moreover applies in the Flemish soil pollution Decree. Hence, there is some empirical evidence to show that such a balanced and mitigated obligation to provide financial security in limited cases may work effectively.

## ALTERNATIVE FINANCIAL ARRANGEMENTS

Another issue addressed in the study on financial assurance issues of environmental liability is whether other financial arrangements could be advanced, other than traditional liability insurance, to cover damage caused to biodiversity and natural resources. This question is a crucial one, in the light of the findings above, being that:

- Strict environmental liability with an insolvency risk is only efficient if the insolvency problem can be cured through financial security;
- The development of the liability insurance market in some countries is still weak; and
- The policy-maker might not want to become too dependent on the liability insurance market.

This therefore justifies the question of whether alternatives are available. Although many alternatives, such as using capital markets, could be developed theoretically, we

addressed some alternatives with which there have already been positive experiences:<sup>45</sup>

- The Dutch experience with environmental damage insurance shows that effective compensation can be better provided through first-party insurance than through liability insurance. Although the scope of coverage of this policy evidently depends on the insurance contract, the reactions of the industry so far and the first experiences seem quite promising;<sup>46</sup>
- Risk-sharing agreements by operators may provide better results either if capacity on insurance markets is limited, or if it can be assumed that information necessary to control risk (and moral hazard) optimally is better available with operators than with insurers. Some experiences with larger risks (oil pollution and nuclear liability) have shown that these risk-sharing agreements may in some cases provide better results than traditional liability insurance.<sup>47</sup> An advantage of these alternative arrangements is, moreover, that one does not necessarily need adequate information on the predictability of the risk *ex ante*, provided that an adequate monitoring is possible;<sup>48</sup>
- Finally, a variety of arrangements provided by financial markets could be used, such as *ex ante* guarantees and deposits into an environmental savings account. Again, the proposals by the Flemish Interuniversity Commission seem quite interesting in that respect since they allow for a variety of financial instruments which

45 For a nice overview of alternatives see J.R. Tyran and P. Zweifel, 'Environmental risk internalization through capital markets (Ericam): the case of nuclear power', *International Review of Law and Economics*, 1993, at 431 to 444; M. Radetzki and M. Radetzki, 'Private arrangements to cover large-scale liability caused by nuclear and other industrial catastrophes', *The Geneva Papers on Risk and Insurance*, 2000, at 180 to 195.

46 For a good description of the new policy see J.H. Wansink, 'Verzekering en milieuschade als gevolg van vervoer/opslag van gevaarlijke stoffen', *Tijdschrift voor Milieuaansprakelijkheid*, 1999, at 77 to 82; also C.A. Janssen, 'Aansprakelijkheid voor milieuschade en financiële zekerheid naar toekomstig recht: nieuwe oplossingen. Nederlands Recht' in L.F. Wiggers-Rust and K. Deketelaere (eds), *Aansprakelijkheid voor milieuschade en financiële zekerheid*, Die Keure – Vermande, 1998, at 111 to 112 and P.J.M. Drion, 'Milieu onder één dak: milieuschadeverzekering (MSV)', *Verzekeringsrechtelijke Berichten*, 1998/2, at 19 to 21.

47 See M. Faure and G. Skogh, 'Compensation for damages caused by nuclear accidents: a convention as insurance', *The Geneva Papers on Risk and Insurance*, 1992, at 499 to 513.

48 See G. Skogh, 'Development Risks, Strict Liability and the Insurability of Industrial Hazards', *The Geneva Papers on Risk and Insurance*, 1998, at 247 to 265, and G. Skogh, 'Mandatory insurance: transaction costs analysis of insurance', in B. Bouckaert and G. De Geest (eds), *Encyclopedia of Law and Economics*, II, *Civil Law and Economics*, Cheltenham, Edward Elgar, 2000, at 521 to 537.

44 H. Bocken, D. Ryckbost and S. Deloddere, 'Liability and financial guarantees', in H. Bocken and D. Ryckbost (eds), *Codification of environmental law*, Draft Decree on Environmental Policy, London, Kluwer Law International, 1996, at 214 to 223.

could be used by the operator to meet his duty to provide financial security.<sup>49</sup>

This balanced approach once more shows that at the policy level it does not seem appropriate to make a decision in favour of either of those instruments. It seems more appropriate to take into account the existence and working of all of these financial and insurance institutions and to give administrative authorities the task of assessing whether the financial security offered will be effective to guarantee that money will ultimately be available when it has to be used, that is, when environmental damage appears. The latter obviously remains a crucial issue and is according to us a major weakness with so called self-insurance schemes such as 'captives'.<sup>50</sup> These can obviously be used (and often have tax advantages, if the legislator so provides), but ultimately there should be control that the money put in these reserves can be set aside and used exclusively for the goal for which the reservation is made, namely the remediation of biodiversity damage or soil pollution.

## ENVIRONMENTAL DAMAGE WITHOUT LIABILITY

All of these above-mentioned alternative financial arrangements assume that these instruments will be used to assure environmental liability as proposed in the White Paper. This obviously supposes that there is a victim (or government) who can bring a liability claim against a liable polluter. However, it is well known that in many cases of pollution these conditions will not be met:

- If the damage is caused through biodiversity, natural resources or sites on which no individual property rights apply, the question will arise as to who has standing to file a claim in tort;

- In other cases there may be harm to individual property but there may not be a responsible party, because the damage is not caused by an identifiable polluter.<sup>51</sup>

Moreover, one should remember that notwithstanding all the possibilities of wonderful financial arrangements, there is still always the risk that financial resources will be lacking to cover the damage. It should not be forgotten that this risk is, moreover, an important downside of the approach chosen in environmental liability insurance today as far as the coverage in time is concerned, that is, claims made.

We have argued above that only a so-called claims-made policy adequately protects insurers against long tail risks (and even then only to a certain extent). The downside from the victim's or society's point of view is obviously that the essence of a claims-made policy is that after the period of cover expires there will (with a few limited exceptions) no longer be any coverage. This may lead to cases where insurers terminate an insurance policy, fearing that it would amount to claims in the future. If the particular insured cannot find a (claims-made) policy with another insurer and, for example, would go out of business because of lack of insurance coverage, in the end there would be no cover and the old insolvency problem still remains.

In sum, there may still be a number of cases (probably many) where there is damage of the type described in the White Paper, but no possibility of securing financial compensation from a responsible party. For these cases compensation funds might be a solution. These specific cases were obviously not the subject of the study on financial assurance issues, since we limited ourselves to the question of whether the environmental liability in the White Paper could be assured. However, the examples show that by merely providing financial security for environmental liability, only a part of the problem is dealt with. Moreover, it should be remembered that if no financial security regime is worked out for these other cases (where there is no liability or no financial security) there is always the risk that environmental liability would be enlarged to provide coverage also in cases where we would argue that this runs counter to the economic principles sketched above in the section on efficiency. In other words, to avoid such an 'abuse' of environmental liability, or more politely, to avoid judges or legislators tending wrongly to enlarge the scope of environmental liability, it seems necessary to provide a financial security system also for the cases where

49 See H. Bocken and D. Ryckbost, 'Deposits', in H. Bocken and D. Ryckbost (eds), *Codification of Environmental Law. Draft Decree on Environmental Policy*, London, Kluwer Law International, 1996, at 224.

50 See on captives and the different forms they may take: P.A. Bawcut, *Captive Insurance Companies, Establishment, Operation and Management*, 3rd edn, Woodhead-Faulkner, New York, 1991; T. Dowding, *Global Developments in Captive Insurance*, FT Financial Publishing, London, 1997 and *Captive Insurance: a Threat to the Global Insurance Industry?*, Data Monitor, FT Insurance Report, Pearson Professional Ltd, London, 1993; J. Zech, 'Will the international insurance market replace traditional insurance products?', *Geneva Papers on Risk and Insurance*, 1998, at 494.

51 This issue has been addressed in the dissertation by A. Carrette, *Herstel en vergoeding voor aantasting aan niet-toegeëigende milieubestanden*, Antwerp, Intersentia, 1997.

environmental liability does not apply. Only then can one have a guarantee that environmental liability will only be used in such a way that it can fulfil its functions of effective prevention and compensation.<sup>52</sup>

## INFLUENCE OF COMPETITION POLICY

Finally, it should be stressed that in order to increase the insurability and the capacity of insurers, co-operation between insurance undertakings or industrial operators might be necessary. This co-operation is important, for example, for:

- The co-operation between insurers to acquire adequate and reliable statistics on risks;
- The co-operation between insurers to create a larger capacity via, for example, pooling.

Whereas one could argue that these types of co-operation may endanger the competition between insurance and financial institutions we should stress that most of these practices are exempted in Commission Regulation 3932/92 of 21 December 1992.<sup>53</sup> A Commission report of 12 May 1999 on the application of this Regulation makes clear that an exchange of information between companies is certainly allowed.<sup>54</sup> The Commission holds<sup>55</sup> that these agreements on keeping registers or exchanging information have the aim of making it possible for insurers to know better the nature of the risks to be insured. These agreements do not fall formally within Article 81(1) (*ex* Article 85(1)) if they restrict themselves to giving information on aggravated risks. In any case, the Commission holds that a simple exchange of information

on the nature of a risk does not appear to have the aim of restricting competition between insurers. However, the Commission is careful and argues that it is different if the exchange of information is accompanied by an agreement aiming to adopt a common attitude with regard to the risk in question. For example, recommendations to refuse to cover the aggravated risks in question or to raise the risk premiums for these risks fall clearly within the scope of Article 81(1) (*ex* Article 85(1)) and do not appear exempt under the terms of Article 81(3) (*ex* Article 85(3)), according to the report.

Also, as far as pooling is concerned, the Commission noted that pools are allowed when they are necessary to allow their members to provide a type of insurance they could not provide alone.<sup>56</sup> Thus European competition policy strengthens and encourages the possibilities of increasing the insurability of the environmental risk.

However, allowing increased co-operation between insurers always has a downside. There will always be the risk that through an effective organisation the insurance or financial sector might act as an effective cartel. One downside of this is that it becomes difficult to acquire reliable information, for example, on financial capacities to insure. It is not argued that this should lead to the conclusion that the policy-maker should not co-operate with the financial or insurance world to acquire information on assurability of environmental liability. However, it shows that the policy-maker should always be aware of this risk and hence, as far as possible, try to acquire adequate and reliable information on a competitive market.

## CONCLUDING REMARKS

This article has had only a limited scope: it has addressed the White Paper on environmental liability, launched by the European Commission, from the point of view of efficiency and insurability on the basis of a study previously undertaken for the European Commission. Hence, there has been no attempt at an analysis of all the legal aspects of the White Paper. Excellent descriptions and analyses of the White Paper have already been provided, including in this journal.<sup>57</sup> This article has merely been concerned with the question of whether the liability regime proposed in the White Paper is compatible with the economic analysis of accident law and it has addressed the liability regime proposed in the White Paper from an insurability angle.

52 See further on this issue of compensation funds H. Bocken, 'Systèmes Alternatives pour l'Indemnisation des Dommages dû à la pollution', *Revue Général des Assurances et des Responsabilités*, 1990, at 11698 to 11714; H. Bocken, 'Alternatives to Liability and Liability Insurance for the Compensation of Pollution Damages', *Tijdschrift voor Milieuaansprakelijkheid*, 1987, 83-87 and *Tijdschrift voor Milieuaansprakelijkheid*, 1988, 3 to 10; and H. Bocken, 'Complementary Compensation Mechanisms. A General Environmental Damage Fund?', in H. Bocken and D. Ryckbost (eds), *Insurance of Environmental Damage*, at 425 to 437. See also M. Faure and T. Hartlief, 'Compensation funds versus liability and insurance for remedying environmental damage', *Review of European Community and International Environmental Law*, 1996, at 321 to 326.

53 Official Journal L398/7 of 31 December 1992. For a comment on this exemption regulation see G. Levie and H. Cousy (eds), *La politique Européenne de concurrence en matière d'assurance*, Bruylant, Brussels, 1994.

54 See the report of the Commission to the European Parliament and to the Council of 12 May 1999 concerning the operation of the exemption regulation 3932/92 (Com (1999) 92 final).

55 See report, no. 47.

56 See report, no. 32.

57 See the studies referred to in Note 1 above.

Even within this limited scope one has to be very careful with drawing conclusions. Indeed, many important issues concerning environmental liability (such as the applicable defences, causation, and so on) are still left open. It is still too early for a final judgment on the efficiency of the proposed liability regime.

Notwithstanding these limits, one can be relatively positive concerning the issues on which the White Paper has already taken a position, at least from an economic angle. For example, the fact that a balanced approach is chosen in which strict liability is only proposed for dangerous and potentially dangerous activities regulated by EC environmental related law complies to a large extent with the economic analysis of accident law which predicts that a strict liability rule is more efficient in case of these hazardous activities, since in such situations it is more important to control the injurer's activity. For other situations a fault regime can suffice, which is precisely what the White Paper proposes. Moreover, if the victim can have an influence on the accident risk as well (the so-called bilateral case) a contributory negligence defence should be added to the strict liability rule, which is precisely what is also proposed in the White Paper.

More importantly, the White Paper has also clearly taken a position against a retroactive application of the new liability regime. If one believes that liability rules should give incentives for prevention, a new liability regime should in principle only apply to 'new' behaviour. Hence, the non-retroactivity seems also to comply with economic analysis.

However, one point of concern remains, namely the question of whether the insolvency problem can be cured. Indeed, economic literature also indicated that precisely in case of strict liability the insolvency problem will lead to underdeterrence. The approach chosen in the White Paper to try a strict liability rule without an appropriate remedy for the insolvency risk seems therefore highly dangerous. If strict liability is introduced and an insolvency risk seems real, remedies should be provided such as, for example, a duty to provide sufficient financial coverage.

Obviously the White Paper, supported by economic analysis, supposes that a liability regime will have a positive effect on the incentives to prevent environmental harm. However, it should not be forgotten that to a large extent the deterrent effect of environmental liability may be diluted in cases where there is, for example, latency, problems of proof or causal uncertainty. For all of these reasons liability rules are often supplemented by regulation. However, even if regulation plays primary role in the prevention of environmental risk, this does not mean that compliance with regulation should automatically remove liability. In all cases where it is clear that the potentially

responsible party could have taken additional efficient measures (above the regulatory standard) to prevent environmental harm, a so-called regulatory compliance defence should not be accepted.

Where it is therefore difficult to provide a final judgment on the efficiency of the liability regime provided for in the White Paper, the same is true for insurability. Still too many issues are not yet settled. At this stage one can only note that the White Paper sketches general ideas. It is therefore not possible to make a final judgment on the insurability of the proposed regime at this stage. In order to do so one should be able to test whether the proposed environmental liability regime is precise enough to allow it to be predictable and thus insurable. However, one should not hold that a liability regime for damage to biodiversity is uninsurable as such because it would be too vague.

It will be important to see how the notion of liability for biodiversity damage will precisely be defined in the future regime. If the concept is 'liability for biodiversity' but the remedy is a duty to pay for (reasonable and proportional) remediation costs, practice has shown that policies covering remediation costs are available. This is more particularly the case if insurance is not offered via traditional liability insurance, but on a first-party basis.

Indeed, the experience in some countries (notably in the Netherlands) has shown that many alternatives exist to traditional liability insurance which may provide coverage for the environmental risk at lower costs and more effectively than traditional liability insurance. However, an important condition for such a broad supply of a large variety of differentiated financial arrangements on insurance and financial markets is obviously that these markets should be sufficiently competitive. Therefore we have held that it is in the interest of environmental policy that a policy to increase the provision of those financial and insurance arrangements should be accompanied by an effective competition policy. This may strengthen and encourage the possibilities of increasing the insurability of the environmental risk.